



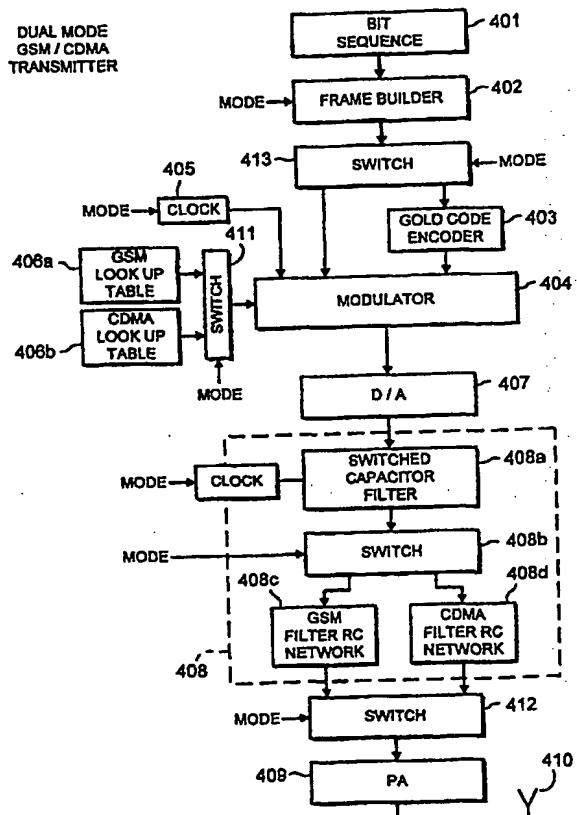
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|----------------------------|---|-----------|----------------------------|----|-----------|----------------------------|----|-----------|----------------------------|----|-----------|----------------------------|----|-----------|-------------------------|----|-----------|--------------------------|----|-----------|--------------------------|----|-----------|--------------------------|----|
| (51) International Patent Classification ⁶ : H04L 25/03, 27/00, H04B 7/26 | A1 | (11) International Publication Number: WO 99/38298 (43) International Publication Date: 29 July 1999 (29.07.99) | | | | | | | | | | | | | | | | | | | | | | | | |
| (21) International Application Number: PCT/GB99/00203 | | (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAFT patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, SN, TD, TG). S/6252100 07/21/00 | | | | | | | | | | | | | | | | | | | | | | | | |
| (22) International Filing Date: 21 January 1999 (21.01.99) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>(30) Priority Data:</p> <table> <tr><td>9801308.9</td><td>21 January 1998 (21.01.98)</td><td>GB</td></tr> <tr><td>9801306.3</td><td>21 January 1998 (21.01.98)</td><td>GB</td></tr> <tr><td>9801305.5</td><td>21 January 1998 (21.01.98)</td><td>GB</td></tr> <tr><td>9801302.2</td><td>21 January 1998 (21.01.98)</td><td>GB</td></tr> <tr><td>9804600.6</td><td>5 March 1998 (05.03.98)</td><td>GB</td></tr> <tr><td>9805126.1</td><td>11 March 1998 (11.03.98)</td><td>GB</td></tr> <tr><td>9805234.3</td><td>12 March 1998 (12.03.98)</td><td>GB</td></tr> <tr><td>9805504.9</td><td>13 March 1998 (13.03.98)</td><td>GB</td></tr> </table> | | | 9801308.9 | 21 January 1998 (21.01.98) | GB | 9801306.3 | 21 January 1998 (21.01.98) | GB | 9801305.5 | 21 January 1998 (21.01.98) | GB | 9801302.2 | 21 January 1998 (21.01.98) | GB | 9804600.6 | 5 March 1998 (05.03.98) | GB | 9805126.1 | 11 March 1998 (11.03.98) | GB | 9805234.3 | 12 March 1998 (12.03.98) | GB | 9805504.9 | 13 March 1998 (13.03.98) | GB |
| 9801308.9 | 21 January 1998 (21.01.98) | GB | | | | | | | | | | | | | | | | | | | | | | | | |
| 9801306.3 | 21 January 1998 (21.01.98) | GB | | | | | | | | | | | | | | | | | | | | | | | | |
| 9801305.5 | 21 January 1998 (21.01.98) | GB | | | | | | | | | | | | | | | | | | | | | | | | |
| 9801302.2 | 21 January 1998 (21.01.98) | GB | | | | | | | | | | | | | | | | | | | | | | | | |
| 9804600.6 | 5 March 1998 (05.03.98) | GB | | | | | | | | | | | | | | | | | | | | | | | | |
| 9805126.1 | 11 March 1998 (11.03.98) | GB | | | | | | | | | | | | | | | | | | | | | | | | |
| 9805234.3 | 12 March 1998 (12.03.98) | GB | | | | | | | | | | | | | | | | | | | | | | | | |
| 9805504.9 | 13 March 1998 (13.03.98) | GB | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>(71) Applicant (for all designated States except US): NOKIA MOBILE PHONES LIMITED [FI/FI]; Keilalahdentie 4, FIN-02150 Espoo (FI).</p> <p>(72) Inventor; and</p> <p>(75) Inventor/Applicant (for US only): LOBO, Natividade, Albert [GB/GB]; 5 Ellison Close, Windsor, Berkshire SL4 4BZ (GB).</p> <p>(74) Agents: FRAIN, Timothy, John et al.; Nokia IPR Dept., Nokia House, Summit Avenue, Southwood, Farnborough, Hampshire GU14 0NZ (GB).</p> | | | | | | | | | | | | | | | | | | | | | | | | | | |

(54) Title: PULSE SHAPING ACCORDING TO MODULATION SCHEME

(57) Abstract

A method is provided for defining a pulse function shape for acting on a data stream for transmission in a telecommunication system in accordance with a predetermined modulation scheme. The method comprises defining desired cost parameters (e.g. error functions for amplitude, BER, bandwidth, energy, AFC) and defining the shape of the pulse function in dependence of the desired cost parameters. A pulse generator, modulator and communications device using such a defined generator, modulator and communications device using such a defined mode are also provided. Application in dual mode TDMA/CDMA system.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

| | | | | | | | |
|----|--------------------------|----|---------------------------------------|----|---|----|--------------------------|
| AL | Albania | ES | Spain | LS | Lesotho | SI | Slovenia |
| AM | Armenia | FI | Finland | LT | Lithuania | SK | Slovakia |
| AT | Austria | FR | France | LU | Luxembourg | SN | Senegal |
| AU | Australia | GA | Gabon | LV | Latvia | SZ | Swaziland |
| AZ | Azerbaijan | GB | United Kingdom | MC | Monaco | TD | Chad |
| BA | Bosnia and Herzegovina | GE | Georgia | MD | Republic of Moldova | TG | Togo |
| BB | Barbados | GH | Ghana | MG | Madagascar | TJ | Tajikistan |
| BE | Belgium | GN | Guinea | MK | The former Yugoslav Republic of Macedonia | TM | Turkmenistan |
| BF | Burkina Faso | GR | Greece | ML | Mali | TR | Turkey |
| BG | Bulgaria | HU | Hungary | MN | Mongolia | TT | Trinidad and Tobago |
| BJ | Benin | IE | Ireland | MR | Mauritania | UA | Ukraine |
| BR | Brazil | IL | Israel | MW | Malawi | UG | Uganda |
| BY | Belarus | IS | Iceland | MX | Mexico | US | United States of America |
| CA | Canada | IT | Italy | NE | Niger | UZ | Uzbekistan |
| CF | Central African Republic | JP | Japan | NL | Netherlands | VN | Viet Nam |
| CG | Congo | KE | Kenya | NO | Norway | YU | Yugoslavia |
| CH | Switzerland | KG | Kyrgyzstan | NZ | New Zealand | ZW | Zimbabwe |
| CI | Côte d'Ivoire | KP | Democratic People's Republic of Korea | PL | Poland | | |
| CM | Cameroon | KR | Republic of Korea | PT | Portugal | | |
| CN | China | KZ | Kazakhstan | RO | Romania | | |
| CU | Cuba | LC | Saint Lucia | RU | Russian Federation | | |
| CZ | Czech Republic | LI | Liechtenstein | SD | Sudan | | |
| DE | Germany | LK | Sri Lanka | SE | Sweden | | |
| DK | Denmark | LR | Liberia | SG | Singapore | | |
| EE | Estonia | | | | | | |